UNITED STATES NAVAL OBSERVATORY

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TRACKS OF TOTAL SOLAR ECLIPSES IN 1952, 1953, 1954

At the request of Commission 13 of the International Astronomical Union, these data have been specially calculated in the Office of the American Ephemeris, from tabular positions of the Sun and Moon computed for the purpose in the British Nautical Almanac Office. The aim is to provide the location of tracks of total solar eclipses far enough in advance so that in regions where extended meteorological observations are lacking, suitable sites for eclipse expeditions can be determined. It is intended to issue this information as rapidly as it can be prepared, until it is eight years in advance, after which it will be issued annually.

The following corrections have been applied to the tabular positions of the Sun and Moon: to the Sun's mean longitude, $+1''.00$; to the Moon's mean longitude, $-2''.00$; to the Moon's latitude, $-0''.5$. The effect of a subsequent additional correction to the Moon's mean longitude on the position of the eclipse track may be closely determined as follows: for an additional positive correction of k seconds of arc, lay off from any point on the track a distance of $27k$ seconds of arc in longitude, eastward along the same parallel of latitude.

The approximate width of the path has been calculated from the formulae of Michailov, *A. N.* **243**, 49. The width is approximately the great-circle distance, on the surface of the Earth, perpendicular to the track, in statute miles.

No total solar eclipses occur in 1951 or in 1953.

Total Solar Eclipse of February 25, 1952

Universal Time	Latitude	Longitude	Duration on Central Line	Width of Path
	° ′	° ′	s	mi
Limit ($7^h38^m.8$)	+ 0 46.5	+21 14.4	..	..
40	− 0 16.0	+13 28.0	87	55
45	− 0 41.5	+ 4 13.9	107	64
50	− 0 25.5	− 1 02.9	120	69
55	+ 0 05.0	− 5 01.4	130	73
8 00	+ 0 43.8	− 8 16.8	139	77
05	1 28.3	11 03.9	147	80
10	2 17.3	13 30.9	154	82
15	3 09.9	15 42.6	161	84
20	4 05.4	17 42.4	166	85
25	5 03.6	19 32.7	171	86
30	+ 6 04.1	−21 15.2	175	87
35	7 06.9	22 51.3	179	88
40	8 11.6	24 22.2	182	88
45	9 18.4	25 48.8	185	88
50	10 27.1	27 12.0	187	88
55	11 37.6	28 32.5	188	87
9 00	+12 50.0	−29 50.8	189	87
05	14 04.3	31 07.8	190	86
10	15 20.6	32 23.8	189	86
15	16 38.8	33 39.6	189	85
20	17 59.2	34 55.7	188	84
25	19 21.7	36 12.7	186	83
30	+20 46.5	−37 31.4	184	82
35	22 13.8	38 52.4	182	81
40	23 43.8	40 16.6	179	80
45	25 16.8	41 44.9	175	79
50	26 52.9	43 18.5	171	78
55	28 32.7	44 58.8	167	77
10 00	+30 16.6	−46 47.6	162	75
05	32 05.1	48 47.1	157	74
10	33 59.2	51 00.4	151	72
15	35 59.8	53 31.9	144	70
20	38 08.6	56 28.0	136	68
25	40 28.0	59 59.1	128	66
30	+43 02.0	−64 23.8	119	63
35	45 58.8	70 22.0	107	60
40	50 26.4	79 51.5	92	55
Limit ($10^h43^m.1$)	54 23.7	−99 11.6	..	..

West longitudes are positive. Geocentric conjunction occurs at $9^h36^m20^s.28$, in right ascension $22^h30^m07^s.94$, the declination of the Sun being $-9^\circ 24'40''.48$.

Total Solar Eclipse of June 30, 1954

Universal Time	Latitude	Longitude	Duration on Central Line	Width of Path
	° ′	° ′	s	mi
Limit ($11^h 7^m.7$)	+42 22.0	+99 04.5	...	..
11 10	47 58.9	86 55.6	84	76
15	52 13.7	76 58.6	97	82
20	54 57.7	69 41.1	107	85
25	57 01.5	63 18.5	114	87
30	+58 39.3	+57 22.2	121	88
35	59 57.3	51 40.4	127	90
40	60 59.0	46 07.5	132	91
45	61 46.2	40 40.8	137	91
50	62 20.5	35 19.5	141	92
55	62 42.8	30 04.1	144	93
12 00	+62 54.0	+24 55.4	147	93
05	62 54.8	19 54.7	150	93
10	62 45.9	15 03.3	152	94
15	62 28.0	10 22.2	154	94
20	62 01.8	5 52.4	154	94
25	61 27.8	+ 1 34.3	155	94
30	+60 46.6	- 2 31.8	155	95
35	59 58.8	6 26.3	155	95
40	59 04.8	10 09.5	154	95
45	58 05.0	13 42.2	153	95
50	56 59.6	17 05.4	151	95
55	55 48.9	20 20.1	149	95
13 00	+54 33.0	-23 27.7	147	95
05	53 12.0	26 29.7	144	95
10	51 45.6	29 27.5	140	94
15	50 13.6	32 23.1	137	94
20	48 35.6	35 18.5	132	93
25	46 50.8	38 16.4	127	92
30	+44 57.9	-41 20.2	122	92
35	42 55.3	44 34.7	116	90
40	40 39.6	48 07.4	109	88
45	38 05.1	52 11.6	101	86
50	34 58.2	57 17.6	92	81
55	30 23.2	65 29.6	78	73
Limit ($13^h 56^m.6$)	+26 19.2	-73 56.6	..	..

WEST longitudes are positive.

Geocentric conjunction occurs at $12^h 21^m 32^s.28$ in right ascension $6^h 35^m 33^s.67$, the declination of the Sun being $+23^\circ 11' 38''.22$.